

App. No.: 10/068,009
Amendment Dated March 18, 2005
Reply to Office Action of January 13, 2005

REMARKS/ARGUMENTS

In the Office Action, claims 8-11 were pending, and upon entry of the present amendment, these claims remain pending, and claims 18-29 are added. Applicants submit that the addition of these new claims does not introduce new matter to the specification.

The Office Action raised a number of objections to certain portions of the specification, and Applicants wish to thank the Examiner for the assistance in proposing amendments to overcome the objections. Applicants have amended these portions of the specification, and submit that the above amendments overcome those objections. Applicants note that the reference in paragraph [01] to another application was erroneous, and has been deleted.

The Office Action also objected to the drawings for including reference numbers that were not mentioned in the specification. Applicants submit that the listed reference numbers have been added by way of the amendments above, or were in the specification originally. Specifically, reference characters 507 and 707 are added to the specification in the amendments above, while reference characters 195, 196, 197 and 198 appear in paragraph [30] of the original specification. Applicants submit that in view of the above, the objections to the drawings have all been addressed, and no corrected drawing sheets are necessary.

Turning now to the claims, claims 8-11 stand rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter. Although Applicants submit that the originally-recited methods were not merely mathematical algorithms or abstract laws of nature, Applicants have amended independent claim 8 to recite a technological art and practical application in the computer device field.

Claims 8-11 also stand rejected under 35 U.S.C. 103(a) as being unpatentable over Adcock (U.S. Patent No. 5,764,797) in combination with Savakis et al. (U.S. Patent No. 6,671,405). Amended independent claim 8 recites the following:

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A method for determining if received strokes are gestures comprising:

receiving at least one stroke as a user input to a computing device;

normalizing said at least one stroke;

computing Chebychev polynomials for coordinates of the at least one stroke;

passing said polynomials to one or more previously computed Bayes nets for known gestures, each of said gestures being associated with a predetermined command to be executed by said computing device;

determining whether said polynomials correlate with one or more of said Bayes nets;

if said polynomials correlate with one or more of said Bayes nets, then causing said computing device to process said at least one stroke as a gesture and execute a corresponding command; and

if said polynomials do not correlate with any of said Bayes nets, then causing said computing device to withhold rendering said at least one stroke as ink until a predetermined plurality of non-correlating strokes have been accumulated, and rendering said plurality of strokes as ink after said plurality of non-correlating strokes have been accumulated.

In rejecting this claim, the Action relies on Adcock for all recited features, but since the Action admits that Adcock “does not explicitly teach the use of Bayes net to perform the task of classification/pattern recognition,” the Action cites Savakis et al. for the general use of Bayes nets, and combines these two references to allege that claim 8 is obvious. Applicants respectfully traverse these rejections, especially insofar as they may be applied against the claims as amended.

These references, alone and in combination (assuming, *arguendo*, that they are combinable at all), fail to teach or suggest the method recited in claim 8, which includes, among other features, the steps of “passing said polynomials to one or more previously computed Bayes nets for known gestures, each of said gestures being associated with a predetermined command

to be executed by said computing device” and “if said polynomials correlate with one or more of said Bayes nets, then causing said computing device to process said at least one stroke as a gesture and execute a corresponding command.” With regard to Adcock, that reference relates generally to a method for modeling handwriting as a function of time, to facilitate handwriting recognition. Adcock discusses, at col. 5, lines 36-51, an example handwriting recognition classifier that determines whether an input could be recognized as a character. If such a match is found, the matching character is output on the display device, and if no match is found, a message is provided to indicate that the input character could not be recognized. Adcock, col. 5, lines 42-46. Adcock does not, however, teach or suggest “each of said gestures being associated with a predetermined command to be executed by said computing device,” or the execution of that command, as recited (among other features) in amended claim 8.

Furthermore, Adcock fails to teach or suggest the recited step of “if said polynomials do not correlate with one of said Bayes nets, then causing said computing device to withhold rendering said at least one stroke as ink until a predetermined plurality of non-correlating strokes have been accumulated, and rendering said plurality of strokes as ink after said plurality of non-correlating strokes have been accumulated.” Adcock is silent with respect to any such withholding of rendering.

Savakis et al., which is cited in the Action only to show the general use of Bayesian networks, does not overcome these deficiencies. For example, Savakis et al. does not teach or suggest “gestures being associated with a predetermined command to be executed by said computing device.” Savakis et al. relates to automatic systems that can sort through large volumes of photographs and estimates the importance of each photograph to assemble a prioritized digital photo album. Savakis et al., col. 3, line 58 to col. 4, line 5. Savakis et al. recognizes features from photographs to do this prioritization, such as whether they include human skin (col. 8, lines 21-28) and whether they include a human face (col. 9, lines 5-10). Human skin and human faces alone in photographs are hardly gestures, are not used in Savakis et al. as commands, and are neither taught nor suggested in Savakis et al. to be “associated with a predetermined command to be executed by said computing device.”

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Savakis et al. also does not teach or suggest the recited step of “if said polynomials do not correlate with one of said Bayes nets, then causing said computing device to withhold rendering said at least one stroke as ink until a predetermined plurality of non-correlating strokes have been accumulated, and rendering said plurality of strokes as ink after said plurality of non-correlating strokes have been accumulated.” Indeed, Savakis et al. works with photographs that have already been taken, and has does not perform any such rendering.

None of the other references of record overcomes the deficiencies identified above, and Applicants respectfully submit that amended claim 8 distinguishes over the art of record, and is in condition for allowance. Claims 9-11 depend from claim 8, and are allowable for at least the same reasons as claim 8, and further in view of the various advantageous and novel features recited therein.

Applicants also submit that new claims 18-25 also distinguish over the art of record, and are in condition for allowance. For example, independent claim 18 recites the step of “passing said polynomials to one or more Bayes nets, said Bayes nets corresponding to one or more predetermined command gestures,” and as discussed above, neither Adcock nor Savakis et al. teaches or suggests such a method step. Furthermore, independent claim 18 also recites the step of “if the polynomials correspond to one or more of said Bayes nets, causing said computing device to execute one or more commands associated with said predetermined command gestures, and to delete said ink.” None of the art of record teaches or suggests such a method, which includes the recited deletion of ink.

Applicants submit that new independent claim 18 distinguishes over the art of record, and is in condition for allowance. Claims 19-25 depend from claim 18, and are allowable for at least the same reasons as claim 18, and further in view of the various advantageous and novel features recited therein. For example, dependent claim 20 recites “[t]he method of claim 18, wherein one or more of said Bayes nets corresponds to in-the-air command gestures made while a tip of said stylus is not touching said display.” As another example, claim 25 recites “[t]he method of claim 18, further including the step of dropping an earliest received stroke if a maximum number of

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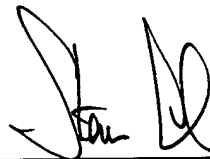
non-corresponding strokes have been reached.” Furthermore, new claims 26-29, which recite similar language found in claims 8-11, and also distinguishable over the art of record and in condition for allowance.

Conclusion

For at least the reasons set forth above, Applicants respectfully submit that pending claims 8-11 and 18-29 distinguish over the art of record, and are in condition for allowance. If the Examiner believes that further discussion and/or amendment may be necessary to place the application in condition for allowance, the Examiner is invited to telephone the Applicants' undersigned representative at the number appearing below.

Respectfully submitted,

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